

Form PTO 1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.	SERIAL NO.				
		8733.20101	New Application				
		APPLICANT					
		Mi Sook NAM et al.					
LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)		FILING DATE	GROUP				
		Herewith	TBA 1172				
JC675 U.S. PRO 09/534723 03/24/00 							
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
84	AA	4,974,941	12/04/90	Gibbons et al	350	349	
WY	AB	5,032,009	07/16/91	Gibbons et al	350	341	
84	AC	5,073,294	12/17/91	Shannon et al	252	299.01	
84	AD	5,296,321	03/22/94	Kawanishi et al	430	20	
84	AE	5,389,698	02/14/95	Chigrinov et al	522	2	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
84 (ABS)	AF	0 525 473	02/03/93	EPO		ABSTRACT	
84 (ABS)	AG	0 525 478	02/03/93	EPO		ABSTRACT	
84 (ABS)	AH	0 611 786	07/23/96	EPO		ABSTRACT	
84	AI	0 708 354	04/24/96	EPO		YES	
84	AJ	0 742 471	11/13/96	EPO		YES	
84	AK	0 750 212	12/27/96	EPO		YES	
84 (ABS)	AB	44 20 585	12/14/95	GERMANY		NO	
SH (U.S.EQUV) US 4963448	AM	64-60833	03/07/89	JAPAN		NO	
84 (ABS)	AN	1-251344	10/06/89	JAPAN		ABSTRACT	
84 (ABS)	AO	1-251345	10/06/89	JAPAN		ABSTRACT	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
84	AP	W. Gibbons, et al., <i>Surface-mediated alignment of nematic liquid crystals with polarized laser light</i> , Letters to Nature, Vol. 351, 05/02/1991, pp. 49 & 50.					
84	AQ	Martin Schadt, <i>Surface-Induced Parallel Alignment of Liquid Crystals by Linearly Polymerized Photopolymers</i> , Jpn. J. Appl. Phys. Vol. 31 (1992), Part 1, No. 7, July 1992.					
84	AR	Yasufumi Iimura, et al., <i>Alignment Control of a Liquid Crystal on a Photosensitive Polyvinylalcohol Film</i> , Jpn. J. Appln. Phys. Vol. 32 (1993), Part 2, No. 1A/B, 01/15/93.					
EXAMINER	<i>Sou-F. Lin</i>			DATE CONSIDERED		<i>07/25/02</i>	
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		8733.20101	New Application 09/534,723
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		Herewith	TBA 1992

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLAS S	SUB CLASS	FILING DATE IF APPROPRIATE
8H	AS	5,447,662	09/05/95	Herr et al	252	582	
8TA	AT	5,453,862	09/26/95	Toko et al	359	76	
8TA	AU	5,464,669	11/07/95	Kang et al	428	1	
8TA	AV	5,479,282	12/26/95	Toko et al	359	75	
8TA	AW	5,538,823	07/23/96	Park et al	430	20	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES	NO
8TA (ABS)	AX	2-55330	02/23/90	JAPAN	ABSTRACT	
8TA (ABS)	AY	2-298917	12/11/90	JAPAN	ABSTRACT	
8TA (ABS)	AZ	3-36527	02/18/91	JAPAN		NO
8TA (ABS)	BA	04-7520	01/10/92	JAPAN	ABSTRACT	
8TA (ABS)	BB	4-284421	10/09/92	JAPAN	ABSTRACT	
8TA (ABS)	BC	4-350822	12/04/92	JAPAN	ABSTRACT	
8TA (ABS)	BD	5-34699	02/12/93	JAPAN	ABSTRACT	
8TA (ABS)	BE	5-53513	03/05/93	JAPAN	ABSTRACT	
8TA (ABS)	BF	5-232473	09/10/93	JAPAN		NO
8TA (ABS)	BG	7-261185	10/13/95	JAPAN	ABSTRACT	

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

8H	BH	KUNIHIRO ICHIMURA, PHOTOCONTROL OF LIQUID CRYSTAL ALIGNMENT, 1993 Kunihiro Ichimura, Photocontrol of Liquid Crystal Alignment, 1993.
8TA	BI	T. Marushii, et al., Photosensitive Orientants for Liquid Crystal Alignment, Mol. Mat. 1993, Vol. 3, pp. 161-168.
8TA	BJ	Y. Toko, et al., TN-LCDs Fabricated by Non-Rubbing Showing Wide and Homogeneous Viewing Angular Characteristics and Excellent Voltage Holding Ratio, SID 93 Digest, pp. 622-625.

EXAMINER	8H - F - 6	DATE CONSIDERED	6/7/25/02
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		Herewith	TBA 1002				
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
874	BK	5,539,074	07/23/96	Herr et al	526	32C	
874	BL	5,576,862	11/19/96	Sugiyama et al	359	75	
874	BM	5,578,351	11/26/96	Shashidhar et al	428	1	
874	BN	5,602,661	02/11/97	Schadt et al	349	124	
874	BO	5,604,615	02/18/97	Iwagoe et al	349	124	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
874 (ABS)	BP	7-56173	03/03/95	JAPAN		ABSTRACT	
874 (ABS)	BQ	8-334790	12/17/96	JAPAN		ABSTRACT	
874 (ABS)	BR	9-211468	08/15/97	JAPAN		ABSTRACT	
874	BS	96/22561	07/25/96	PCT		YES	
874	BT	2 281 977	03/22/95	UK		YES	
874	BU	2 286 893	08/30/95	UK		YES	
874	BV	2 310 048	08/13/97	UK		YES	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
874	BW	P. Shannon, et al., <i>Patterned optical properties in photopolymerized surface-aligned liquid-crystal films</i> , Letters to Nature, Vol. 368, 04/07/94, pp. 532 & 533.					
874	BX	Y. Iimura, et al., <i>Invited Address: Electro-Optic Characteristics of Amorphous and Super-Multidomain TN-LCDs Prepared by a Non-Rubbing Method</i> , SID 94 Digest, pp. 915-918.					
874	BY	M. Schadt, et al., <i>Photo-Generation of Linearly Polymerized Liquid Crystal Aligning Layers Comprising Novel, Integrated Optically Patterned Retarders and Color Filters</i> , Jpn. J. Appl. Phys. Vol. 34 (1995), pp. 3240-3249, Part 1, No. 6A, June 1995.					
EXAMINER <i>874 - F - H.</i>				DATE CONSIDERED <i>07/25/02</i>			
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LIST OF REFERENCES CITED BY APPLICANT (Use Several Sheets if Necessary)		APPLICANT Mi Sook NAM et al.					
		FILING DATE Herewith	GROUP FBA <u>1992</u>				
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<u>P24</u>	CP	5,909,265	06/01/99	Kim et al	<u>349</u>	<u>129</u>	
<u>P24</u>	CQ	5,982,466	11/09/99	Choi et al	<u>349</u>	<u>124</u>	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
<u>P24</u>	CR	A. Lien, <i>UV-Type Two-Domain Wide Viewing Angle TFT/LCD Panels</i> , Asia Display '95, pp. 593-596.					
<u>P24</u>	CS	T. Yamamoto, <i>Liquid-Crystal Alignment by Slantwise Irradiation of Non-Polarized UV Light on a Polyimide Layer</i> , SID 96 Digest, pp. 642-645.					
<u>P24</u>	CT	M. Schadt, et al., <i>Optical patterning of multi-domain liquid-crystal displays with wide viewing angles</i> , Letters to Nature, Vol. 381, 05/16/96					
<u>P24</u>	CU	J. Chen, <i>Model of liquid crystal alignment by exposure to linearly polarized ultraviolet light</i> , Physical Review E, Vol. 54, No. 2, August 1996, pp. 1599-1603					
<u>P24</u>	CV	H. Soh, et al., <i>The Realization of Wide Viewing Angle TFT-LCDs using Photo-Alignment Method</i> , Euro Display '96, pp. 579-582.					
<u>P24</u>	CW	J. Chen, <i>Mechanism of Liquid-Crystal Alignment by Polyimide Exposure to Linearly Polarized UV Light</i> , SID 96 Digest, pp. 634-637					
<u>P24</u>	CX	K. Lee, et al., <i>Late-News Poster: Mechanism of UV Modification of LC Pretilt Angle and Its Application to Two-Domain TN-LCDs</i> , SID 96 Digest, pp. 638-641.					
<u>P24</u>	CY	J. Kim, et al., <i>Late-News Poster: Photo-Alignment of Liquid Crystals Using a New Photopolymer</i> , SID 96 Digest, pp. 646-649.					
<u>P24</u>	CZ	Y. Saitoh, et al., <i>Stability of UV-Type Two-Domain Wide-Viewing-Angle TFT-LCD Panels</i> , SID 96 Digest, pp. 662-665					
<u>P24</u>	DA	D. Seo, et al., <i>Invited Address: Surface Alignment of Liquid Crystals in LCDs</i> , SID 93 Digest, pp. 954-956.					
<u>P24</u>	DB	Y. Iimura, <i>Invited Paper: Prospects of the Photo-Alignment Technique for LCD fabrication</i> , SID 97 Digest, pp. 311-314.					
EXAMINER	<u>Son-Fu H.</u>			DATE CONSIDERED		<u>07/25/02</u>	
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		Herewith	1772 <i>1772</i>				
U.S. PATENT DOCUMENTS							
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		DOCUMENT NUMBER	DATE	COUNTRY		TRANSLATION YES NO	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>SA</i>	DC	R. Shashidhar, et al., A New Non-Rubbing Technique for Liquid-Crystal Alignment, SID 97 Digest, pp. 315-318.					
<i>SA</i>	DD	M. Schadt, et al., Invited Paper: Optical Patterning of Multidomain LCDs, SID 97 Digest, pp. 397-400.					
<i>SA</i>	DE	K. Han, et al., A Study on the Photo-Alignment of the Polymer-Containing Cinnamate Group Using a New Single UV-Exposure Method, SID 97 Digest, pp. 707-710.					
<i>SY</i>	DF	F. Yamada, et al., Late-News Poster: A New Photo-Alignment Scheme for LC-Cell Pretilt Control, SID 97 Digest, pp. 715- 718.					
<i>SA</i>	DG	M. Nam, et al., Wide-Viewing-Angle TFT-LCD with Photo-Aligned Four-Domain TN Mode, SID 97 Digest, pp. 933-936.					
EXAMINER	<i>Soo-F-H.</i>			DATE CONSIDERED		<i>07/25/02</i>	

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U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY
APPLICANT

(Use Several Sheets if Necessary)

Date: December 1, 2000

Attorney Docket No.:
8733.229.00Application No.:
09/534,723Applicant:
Mi Sook NAM et al.Filing Date:
March 24, 2000Group:
Unknown

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U.S. PATENT DOCUMENTS

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	AA						
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	AJ						

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	TRANSLATION	
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AM					
AN					
AO					

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

PA	AP	UK Search Report and Examination, pp. 1-4, July, 2000	RECEIVED JUL 25 2001 TC 2800 MAIL ROOM
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Examiner Signature

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07/22/02

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PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	09/534,723
				Filing Date	March 24, 2000
				First Named Inventor	Mi S. Nam
				Art Unit	1772
				Examiner Name	S. Hon
Sheet	1	of	1	Attorney Docket Number	
				8733.229.00-US	

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